

REMARKS

The claims in the application are 1-29 and Claims 30-32 added by the present amendment.

Favorable reconsideration of the application as amended is respectfully requested.

The specification has been amended in accordance with the request in paragraph 3 of the Office Action, while the claims have been amended to eliminate the objections and rejections under 35 U.S.C. §112, second paragraph, set forth in paragraphs 4 and 6 of the Office Action. Claim 30 introduced herein is directed to recitation deleted from Claim 13 while Claims 31 and 32 find support throughout the present application and drawings, e.g., Figs. 1 and 2 and the accompanying description in the specification. The amendments to independent Claims 1 and 17 also find support throughout the present application, e.g., page 4, lines 1-7, pages 8-11 and Fig. 3 and accompanying description in the specification.

It is respectfully submitted Claim 9 contains definitive recitation of a preferred embodiment of the inventive method, i.e., including activation of a defibrillator. Accordingly, the only outstanding issue is the art rejection of the claims. More particularly, Claims 1, 3, 8, 9, 11-15, 17 and 29 have been rejected under 35 U.S.C. §102 as being anticipated by U.S. Pat. No. 6,292,687 to Lowell et al in paragraphs 8-14 of the Office Action while Claims 1-10 and 16-28 have been rejected as being anticipated by U.S. Pat. No. 5,078,134 to Heilman et al in paragraphs 15-27 of the Office Action. However, it is respectfully submitted the

present invention as recited in all pending claims herein is neither anticipated nor rendered obvious by the applied art, for the following reasons (reference will be made to preferred embodiments illustrated in the drawings of the present application).

The present invention explicitly improves detecting of a cardiac anomaly, e.g., fibrillation, in a patient in a most expeditious manner to provide treatment as soon as possible. The invention provides for continuous monitoring of cardiac parameters of a patient and activating an alarm should a danger threshold or limit be exceeded by one of the monitored parameters. In one embodiment, activating, e.g., of a defibrillator worn by the patient, can immediately take place, even before emergency medical personnel arrive, saving valuable time of critical importance in a cardiac emergency.

These and other advantages are explicitly attained by the inventive method recited in independent Claim 1 directed to a method for detecting an anomaly in cardiac activity of a patient by providing at least one sensor 12 for determining at least one parameter characterizing the cardiac activity of the patient, automatically evaluating this parameter with respect to at least one parameter that characterizes an anomaly in the cardiac activity of the patient, and generating an alarm signal if a limiting value for the anomaly-characterizing parameter is exceeded, with the evaluating and/or alarm-generating steps being carried out remotely to the sensing step 12 on the patient. The inventive device for detecting the cardiac anomaly as recited in independent Claim 17 is directed to at least one sensor 12 arranged to acquire at least one signal characterizing

cardiac activity of the patient, at least one signal evaluation unit 13 connected to the sensor 12 and a signal transmitter 15 connected to the signal evaluation unit 13.

The signal evaluation unit 13 is provided with an analyzer for determining if a limiting value characterizing cardiac anomaly is exceeded by the signal from the sensor 12. Moreover, the signal evaluation unit 13 and/or transmitter 15 are/is positioned remotely from the sensor 12 on the patient. Locating the means for providing a signal, i.e., the signal evaluation unit 13 and/or transmitter 15, remotely from the sensor 12 provides the advantage a patient merely wears or carries the sensor(s) 12 with just a device 16 for transmitting the thus-sensed signal(s) to a receiving unit 17 (Fig. 3), eliminating need for a patient to additionally wear or carry the signal evaluation unit 13 and transmitter 15. This provides much more comfort for the patient and thereby encourages the patient to continuously wear or carry the sensor 12. An alarm will then be immediately generated should a danger limit be exceeded by the evaluated signal from the sensor 12 on the patient, providing for medical intervention as quickly as possible.

The features of the presently claimed invention, together with the accompanying advantages attained thereby, are neither disclosed nor suggested by the applied art for the following reasons.

Lowell et al disclose a medical emergency response and locating system, particularly for cardiac arrest including a heart dysfunction reader 26 and sensor 27 evaluating the heart dysfunction reader 26 worn or attached to a patient,

together with a personal alarm 30, loop processor unit 28 and locator broadcast initiator 31 also attached to or worn by a patient (Fig. 1 and column 4, line 62-column 5, line 17). Accordingly, Lowell et al fail to teach or suggest the invention as recited in Claim 1 wherein the evaluating and/or alarm-generating steps are carried out remotely to the sensing step(s) on the patient, and Claim 17 where the evaluation unit 13 and/or signal transmitter 15 are/is positioned remotely from the sensor 12 on the patient. It is noted Lowell et al have not been applied against dependent claims directed to spatial separation of sensing and evaluating steps (Claim 5) or sensor 12 and evaluation unit 13 (Claim 22). It is also noted Lowell et al. fail to disclose analysis of the state of fibrillation.

Heilman et al disclose a portable device for sensing cardiac function and automatically delivering electrical therapy. In particular, a patient-worn harness or vest is disclosed which incorporates sensing electrodes for monitoring heart condition, a microprocessor, and electrodes for applying electrical pulses to the chest wall of the patient in response to signals received from the microprocessor. Thus Heilman et al fail to disclose conducting evaluating and/or alarm-generating steps remote to a sensing step on a patient, or positioning an evaluation unit 13 and/or signal transmitter 15 remotely from a sensor 12 on a patient. Heilman et al disclose nothing more than the prior art wearable vest described, e.g., in the second paragraph on page 2 of the background portion in the present application.

The remaining art of record has not been applied against the claims and will not be commented upon further at this time.

Accordingly, in view of the forgoing amendment and accompanying remarks, it is respectfully submitted all claims pending herein are in condition for allowance. Please contact the undersigned attorney should there be any questions. A petition for an automatic three month extension of time under 37 C.F.R. §1.136(a) is enclosed in triplicate, together with the requisite petition fee and fee for additional claims introduced herein.

Early favorable action is earnestly solicited.

Respectfully submitted,



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